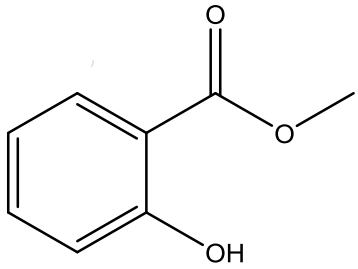
Product Information Sheet



S7785
Methyl Salicylate

Synonym:	2-Hydroxybenzoic acid methyl ester, Wintergreen oil, Methyl 2-hydroxybenzoate, MeSA
CAS:	119-36-8
Formula:	$C_8H_8O_3$
Molecular Wt:	152.15

Properties

Form:	Oily liquid
Appearance:	Colorless to Orange-Green
Application:	Plant Defense and Immunity
Solubility:	0.67 mg/L water, miscible with alcohol
Storage Temp:	RT
Other Notes:	Keep protected from light

Application Notes

Methyl Salicylate (MeSA) has been shown to accumulate in the phloem during systemic acquired response (SAR) (Kumar and Klessig, 2008). It has been suggested to act as a mobile signal due to its formation from SA (salicylic acid, Prod # S7530 & S7580) in tissue generating an immune signal and conversion to SA by MeSA esterase activity in systemic tissues (Spoel and Dong, 2012).

MeSA is also considered to be an airborne plant defense signal that can be used to communicate between plants (Seskar *et al*., 1998). MeSA acts as an airborne defense signal by being converted to SA in the plant (Shulaev *et al.*, 1997).

References

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Kumar D and D F Klessig (2008) The search for the salicylic acid receptor led to discovery of the SAR signal receptor. *Plant Signaling & Behavior* 3:9, 691-692.

Seskar M, V Shulaev and I Raskin (1998) Endogenous Methyl Salicylate in Pathogen-Inoculated Tobacco Plants. Plant Physiol. 116: 387–392.

Shulaev V, P Silverman and I Raskin (1997) Airborne signalling by methyl salicylate in plant pathogen resistance. Nature 385, 718 – 721.

Spoel SH and X Dong. (2012) How do plants achieve immunity? Defence without specialized immune cells. *Nature Reviews Immunology* Vol. 12 pg. 89-100.

_Phyto_Technology Laboratories®
P.O. Box 12205; Shawnee Mission, KS 66282-2205
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
Web Site: www.phytotechlab.com